

**METHODS FOR GENERATING LIGAND ARRAYS VIA DEPOSITION OF
LIGANDS ONTO OLEFIN DISPLAYING SUBSTRATES, AND ARRAYS
PRODUCED THEREBY**

ABSTRACT OF THE DISCLOSURE

Methods of producing ligand arrays, e.g., polypeptide and nucleic acid arrays, as well as the arrays produced thereby, methods for use of the arrays and kits that include the same, are provided. In the subject methods, a substrate having a surface displaying olefinic functional groups, e.g., olefin groups having a single site of unsaturation, are modified such that the olefinic functional groups are converted to ligand reactive functional groups. The resultant substrate is then contacted with ligands, e.g., via deposition of each different ligand onto a different region of the surface, resulting in covalent attachment of the contacted ligand to the surface via reaction with the ligand reactive functional groups. Ligand arrays produced via the subject methods demonstrate a number of desirable properties, e.g., nucleic acid arrays produced by the subject methods provide high signal intensity with low background in nucleic acid hybridization assays, etc.